

REMARKS/ARGUMENTS

This Amendment is submitted in response to the office action mailed Jan. 24, 2003. In that office action the Examiner objected to claim 60. The Examiner rejected claims 1-5, 18-19, 32-34, 43-44, 50-52, 58, 60, and 67 under 35 U.S.C. §102(e) as being anticipated by Barada et al. (United States Patent No. 6,404,088). Claims 61-66 were rejected by the Examiner under 35 U.S.C. §102(e) as being anticipated by Bearnson et al. (United States Patent No. 6,394,769). Claims 6-17, 20-31, 35-42, 45-49, 53-57, and 59 were rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over Barada et al. (United States Patent No. 6,404,088) in view of Ueyama (United States Patent No. 6,215,218).

By this paper, Claims 5 and 6 are cancelled. Claims 1, 7-13, 19, 33, 50, 60, and 67 are amended. A Declaration under 37 C.F.R. §1.132 is submitted herewith to address rejections to claims 61-66. Accordingly, claims 1-4, 7-67 are presented for reconsideration by the Examiner.

Claim Objections

Claim 60 has been amended herein to correct an error in claim dependency. Applicants believe that the objection to claim 60 has been overcome.

Section 102 Rejections

The Examiner rejected claims 1-5, 18-19, 32-34, 43-44, 50-52, 58, 60 and 67 under 35 U.S.C. §102(e) as being anticipated by Barada et al. (U.S. Patent No. 6,404,088). It has been strongly established that claims are anticipated only if each and every element taught in the claims are disclosed in the prior art. *See, e.g., MPEP §2131; Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).* In light of the amendments made herein, the above-listed claims are not anticipated by Barada et al.

As amended herein, claims 1, 19, 33, 50, and 67 teach measuring the axial position of the suspended movable body with a sensor to provide a displacement output. These claims further provide that these displacement outputs are stored over a period of time and that the sensor offset used to adjust the measured displacement output is estimated using the stored displacement outputs. This provides a magnetic bearing system capable of adjusting for sensor drift and

capable of adjusting for sensor offset during regular operation and during reboot or restart situations.

Barada et al. does not teach, disclose, or even suggest the storage of a plurality of displacement outputs and their subsequent use in estimating the sensor offset. In Barada, sensor offset is determined by obtaining maximum and minimum values of the detected positional displacement signal, calculating a middle value from these values, and comparing the middle value with a pre-set threshold value. Any difference between the middle value and the threshold is then used to correct sensor offset. *See, e.g.*, Barada et al., column 2, line 30 to column 3, line 7; column 3, lines 15-28; and column 5, 53-65.

Claims 5 and 6 are cancelled as a result of the amendment to claim 1. Claims 7-13 are amended to change their dependency in light of the cancellation of claims 5 and 6.

The Examiner rejected claims 61-66 under 35 U.S.C. §102(e) as being anticipated by Bearnson et al., (United States Patent No. 6,394,769). A rejection under 35 U.S.C. §102(e) may be overcome by a showing under 37 C.F.R. 1.132 that the invention disclosed in the reference is not an invention “by another.” MPEP 715.01(c) explains that “When the unclaimed subject matter of a patent, application publication, or other publication is applicant's own invention, a rejection on that patent or publication may be removed by submission of evidence establishing the fact that the patentee, applicant of the published application, or author derived his or her knowledge of the relevant subject matter from applicant. *See In re Mathews*, 408 F.2d 1393, 161 USPQ 276 (CCPA 1969); *In re Facius*, 408 F.2d 1396, 161 USPQ 294 (CCPA 1969). The Declaration under 37 C.F.R. 1.132 submitted herewith meets these requirements, and thus overcomes the Examiner's reference.

Section 103 Rejections

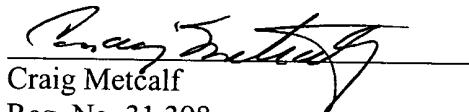
The Examiner rejected claims 6-17, 20-31, 35-42, 45-49, 53-57, and 59 under 35 U.S.C. §103(a) as being unpatentable over Barada et al. (United States Patent No. 6,404,088) in view of Ueyama (United States Patent No. 6,215,218). It has been strongly held that the Examiner carries the burden of establishing a *prima facie* case of obviousness. *See, e.g.*, *In re Glaug*, 283 F.3d 1335 (Fed. Cir. 2002); *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); MPEP

§2142. In order to establish a prima facie case, "all the claim limitations must be taught or suggested by the prior art." MPEP §2143.03. As amended, the claims are not rendered unpatentable by Barada et al. in view of Ueyama.

In the office action of January 24, 2003, the Examiner combined the Magnetic Bearing Device of Barada et al. with a control magnetic bearing system from Ueyama. This was done to impart a "means for storing a plurality of displacement output[s] and keeping the outputs in memory" to Barada's device. Office Action p. 5. This combination does not render the amended claims obvious because it fails to teach the use of a sensor offset estimated using stored displacement outputs.

In view of the foregoing, Applicants respectfully submit that the application is in condition for immediate allowance. In the event that any questions remain, the Examiner is respectfully invited to initiate a telephone conference with the undersigned.

Respectfully submitted,
MADSON & METCALF



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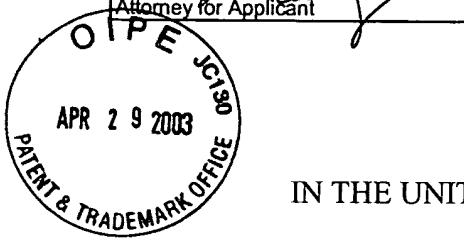
Date: April 24, 2003

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, on April 24, 2003.

Brad E. Paden
Attorney for Applicant



PATENT

Docket No. 2673.2.1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Brad E. Paden et al.)
Serial No.: 09/895,881)
Filed: June 29, 2001) Group Art
For: METHOD AND SYSTEM FOR POSITIONING A) Unit: 2837
MOVABLE BODY IN A MAGNETIC BEARING)
SYSTEM)
Examiner: Tyrone W. Smith)

DECLARATION UNDER 37 C.F.R. §1.132

Assistant Commissioner
For Patents
Washington, D.C. 20231

Dear Sir:

We, Brad E. Paden, Gill B. Bearson, and Jed C. Ludlow, declare as follows:

1. We are co-inventors of the invention which is the subject of the above-identified patent application and are familiar with its contents and subject matter.
2. The patent entitled "Pump Having a Magnetically Suspended Rotor with One Active Control Axis," U.S. Patent Number 6,394,769 (referred to hereinafter as the 'Bearson patent') has been cited in an Office Action mailed January 24, 2003 by the U.S. Patent and Trademark Office.
3. We are co-inventors of the Bearson patent, and are thus familiar with its contents and subject matter.

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4. Any invention disclosed but not claimed in the Bearnson patent was derived from the co-inventors of this application and is thus not an invention "by another."

We declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful, false statements may jeopardize the validity of the application or any patent issuing thereon.

Dated this _____ day of April, 2003.

Brad E. Paden

Dated this _____ day of April, 2003.

Gill B. Bearnson

Dated this _____ day of April, 2003.

Jed C. Ludlow